

MCLEOD & HENRY CO.

Flat Suspended Furnace Arches
Complete Boiler Settings
Sprung Furnace Arches
Boiler-door Arches
Boiler Baffle Tile
Fire-box Lining

ESTABLISHED 1825
ORIGINATORS OF STEEL MIXTURE

MAIN OFFICE AND WORKS, TROY, N. Y.
BRANCHES:
NEW YORK, BOSTON, CLEVELAND AND DETROIT

Back-Combustion-Chamber Arches
Blow-off-Pipe Protectors
High-Temperature Cement
Special Fire Blocks
Standard Fire Brick
Fire Clay

STEEL MIXTURE

Bulletin 158a

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McLeod & Henry Co.

August, 1924

STEEL MIXTURE FIRE BRICK



STEEL MIXTURE, from which our best quality fire brick are made, is backed by over half a century of enviable service records in resisting the destructive influences of the severest furnace service. It has a crushing strength far in excess of the highest loads imposed on properly designed boiler settings, does not become plastic or fuse below 3000 deg. fahr., is pre-shrunk, exceptionally free from cracking, and has a smooth dense non-abrasive surface that resists spalling and gives clinkers little chance for adhering. It meets furnace conditions better than any other material that is priced within reason and invariably proves its superiority over ordinary fire brick in stoker-fired and oil-fired furnaces where a mediocre refractory goes to pieces in no time. STEEL MIXTURE Fire Brick are much longer lived than ordinary fire brick in practically every service, and will give particularly good satisfaction when laid up with STEEL MIXTURE Fire Cement.

For those portions of boiler and other furnaces in which the refractories are not subjected to severe service, and for furnaces in which a high temperature is not carried, we make a medium-duty brick which is sold under the trade mark M & H. Brick of this grade are obtainable at lower cost and are of superior quality for their purpose.

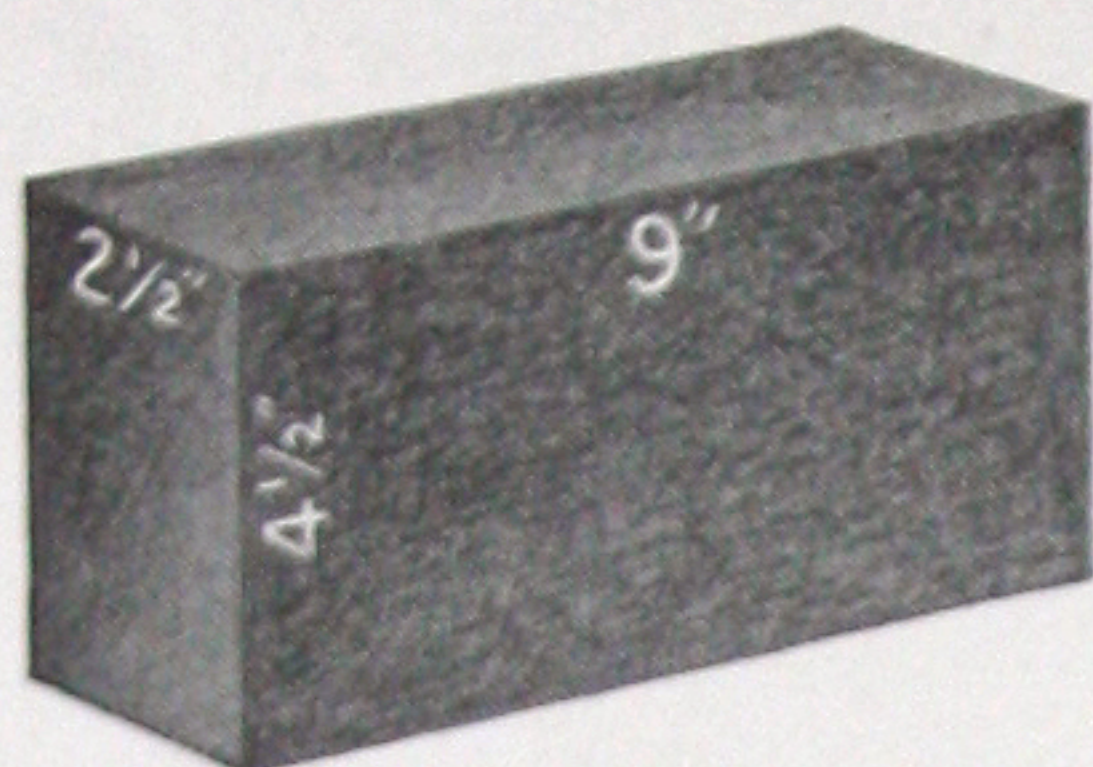
The more common shapes of both STEEL MIXTURE and M & H grades which are carried in stock in large quantities for immediate shipment are shown on inside pages. Prices on application. Shipment in car load lots or in small quantities packed in barrels.

We also manufacture and stock an almost endless variety of special shapes for fire-box lining, boiler-door arches, combustion chamber lining and arches, stoker arches, bridge and baffle walls, blow-off pipe protection, kiln and metallurgical furnace lining, etc.

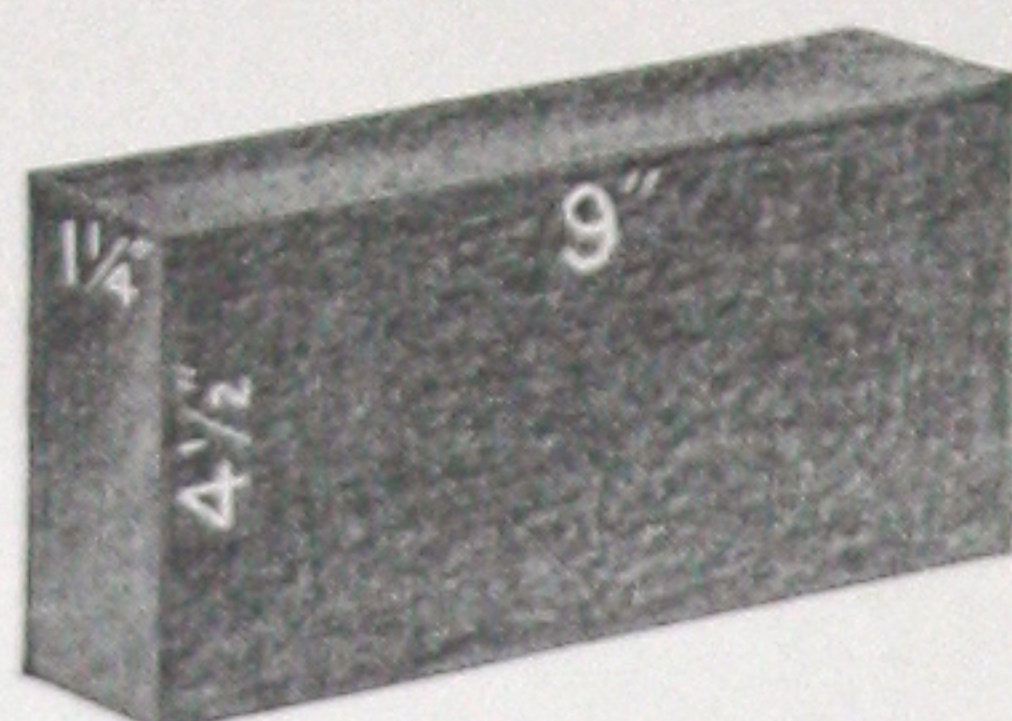
Most of these special shapes are proportioned to interlay perfectly with standard fire brick, and can often be used in conjunction with standard shapes to give better service than obtainable from standard shapes alone.

Almost a century of specialization in refractories and furnace construction fits us eminently to advise the prospective customer to his best interests, and literature, which we will send free on request, will greatly assist in a thorough understanding of furnace requirements and maintenance.

Standard Sizes of STEEL MIXTURE Fire Brick



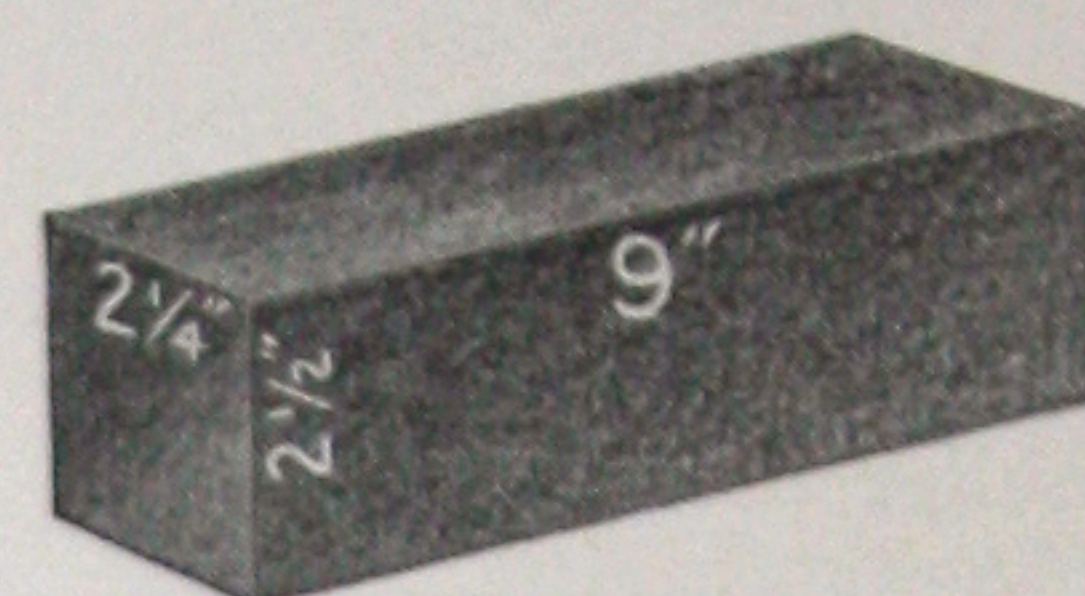
9-in. Straight
9 x 4 1/2 x 2 1/2



No. 1 Split
9 x 4 1/2 x 1 1/4



No. 2 Split
9 x 4 1/2 x 2



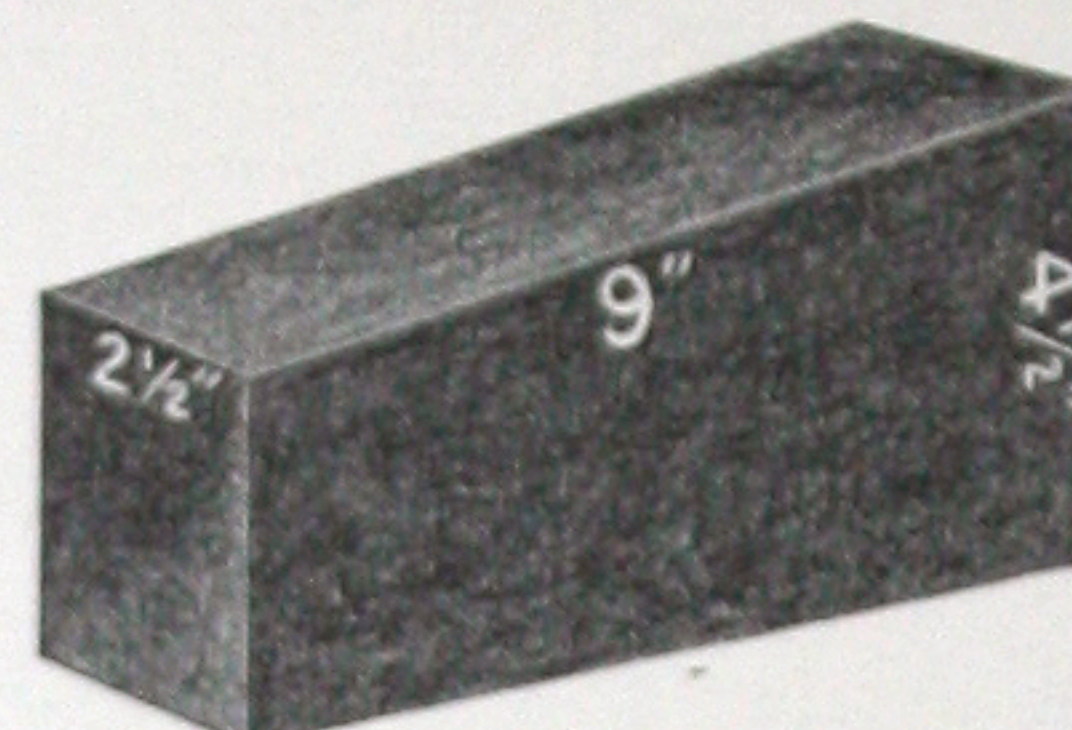
Soap
9 x 2 1/4 x 2 1/2



No. 1 Key
9 x (4 1/2 - 4) x 2 1/2
12' inside diameter
113 brick to the circle



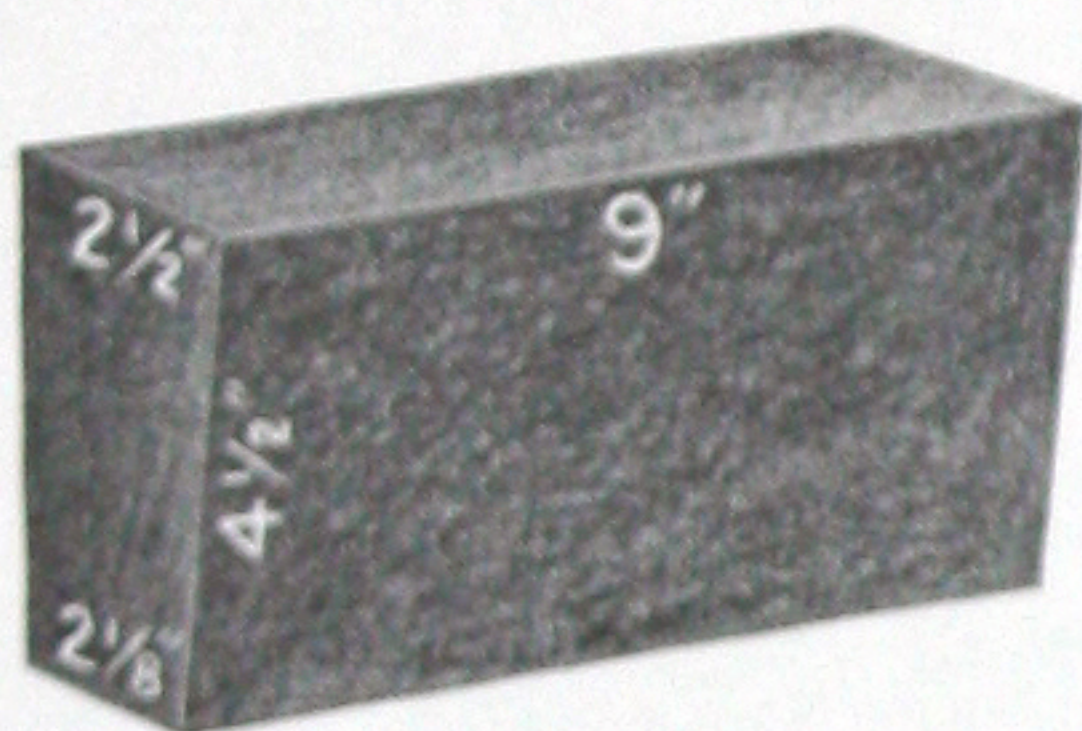
No. 2 Key
9 x (4 1/2 - 3 1/2) x 2 1/2
5' 3" inside diameter
57 brick to the circle



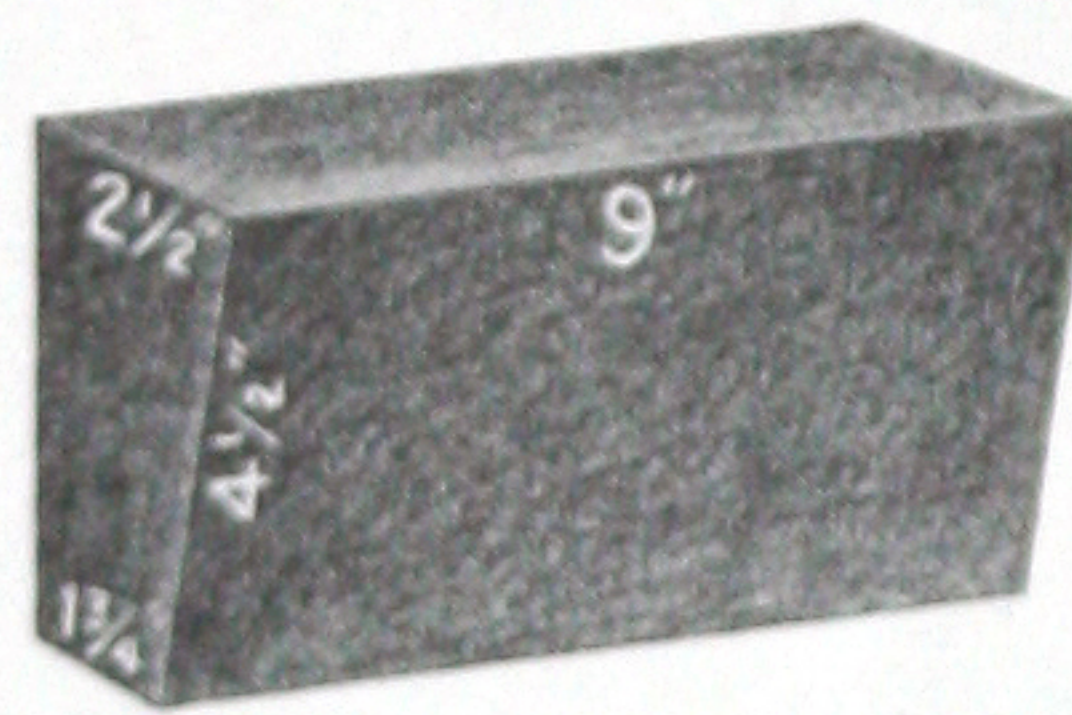
No. 3 Key
9 x (4 1/2 - 3) x 2 1/2
3' inside diameter
38 brick to the circle



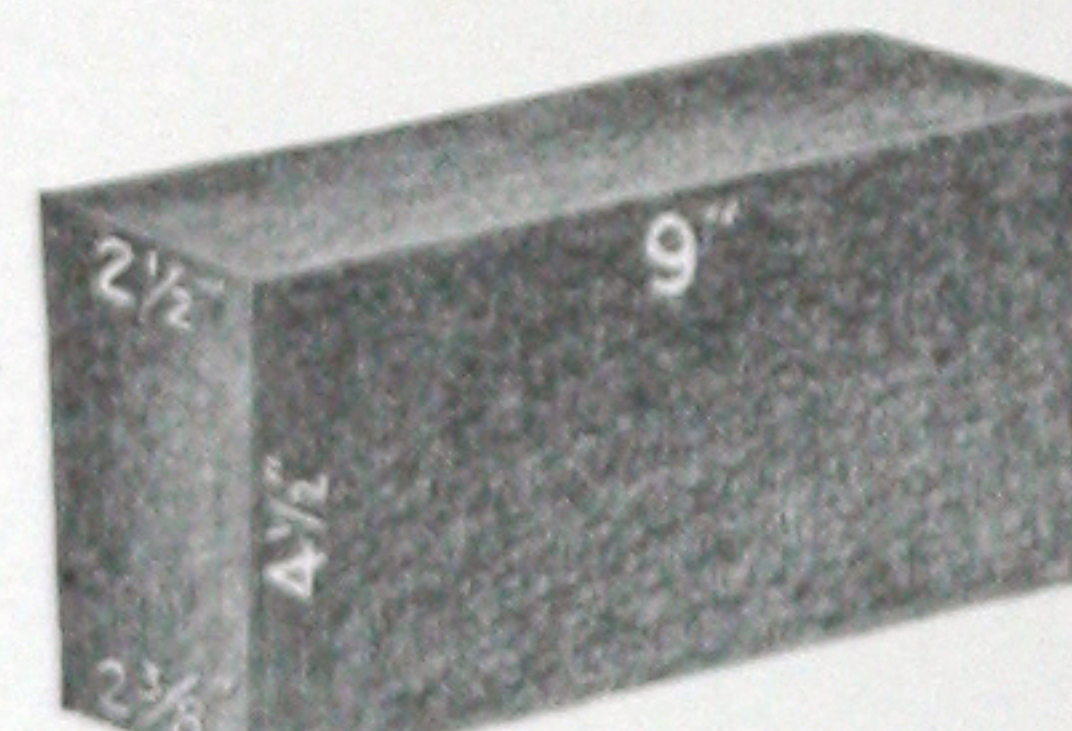
No. 4 Key
9 x (4 1/2 - 2 1/4) x 2 1/2
1' 6" inside diameter
25 brick to the circle



No. 1 Arch
9 x 4 1/2 x (2 1/2 - 2 1/8)
4' 3" inside diameter
76 brick to the circle



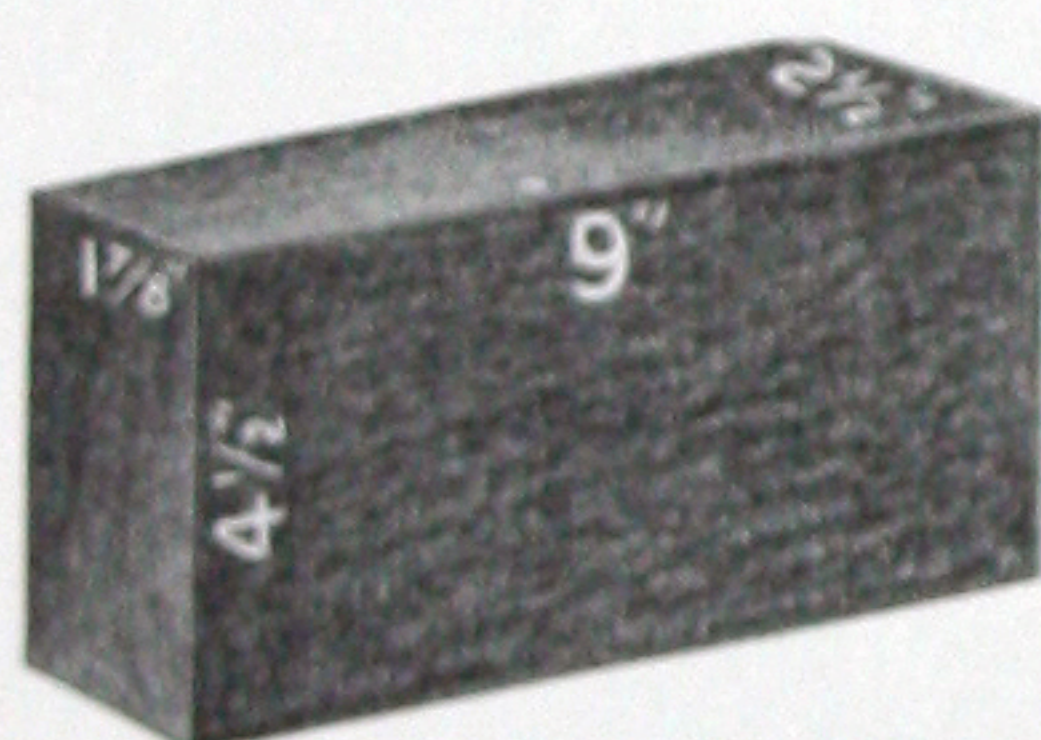
No. 2 Arch
9 x 4 1/2 x (2 1/2 x 1 3/4)
1' 9" inside diameter
38 brick to the circle



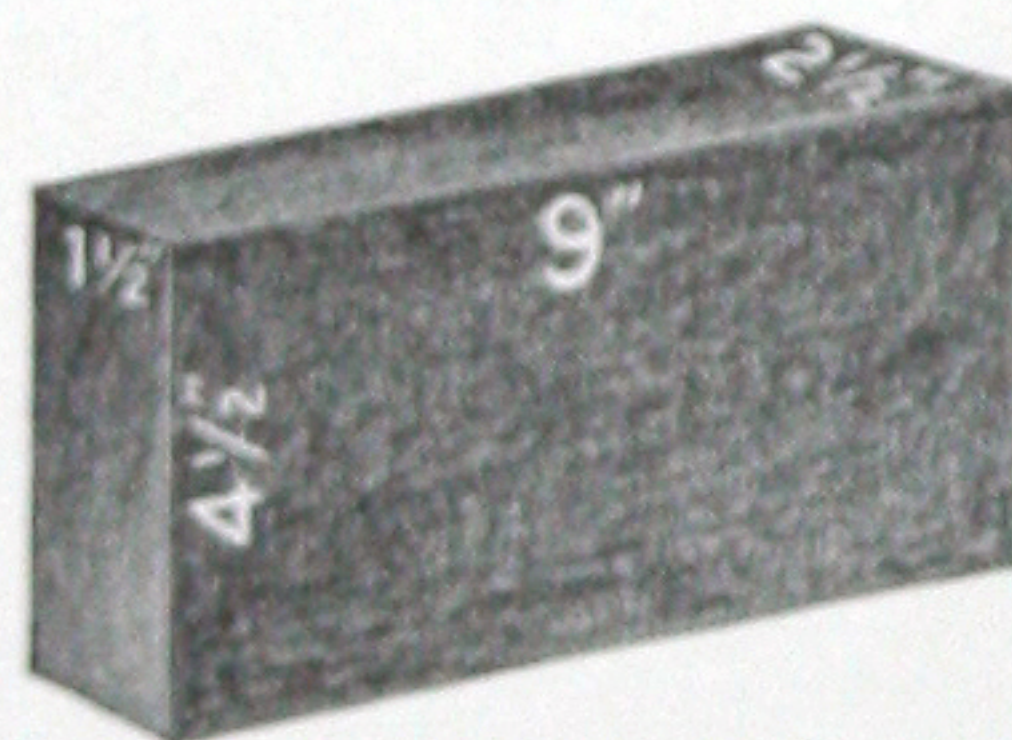
Bung
9 x 4 1/2 x (2 1/2 - 2 3/8)



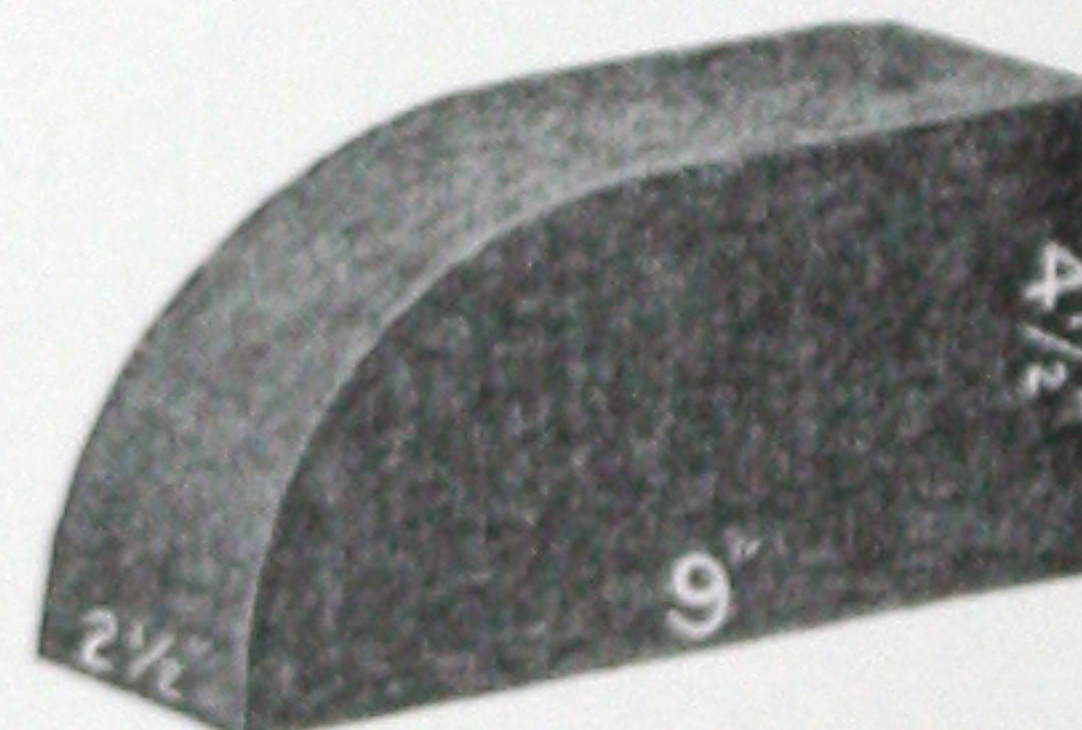
Checker
9 x 2 3/4 x 2 3/4



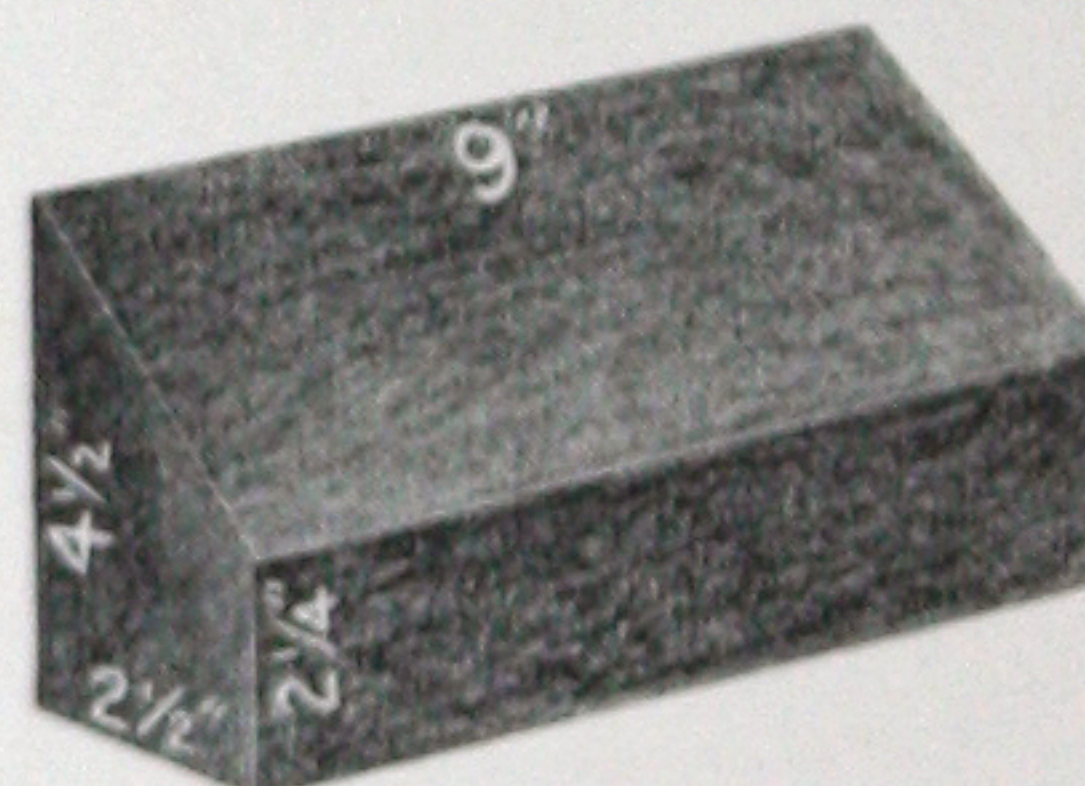
No. 1 Wedge
9 x 4 1/2 x (2 1/2 - 1 7/8)



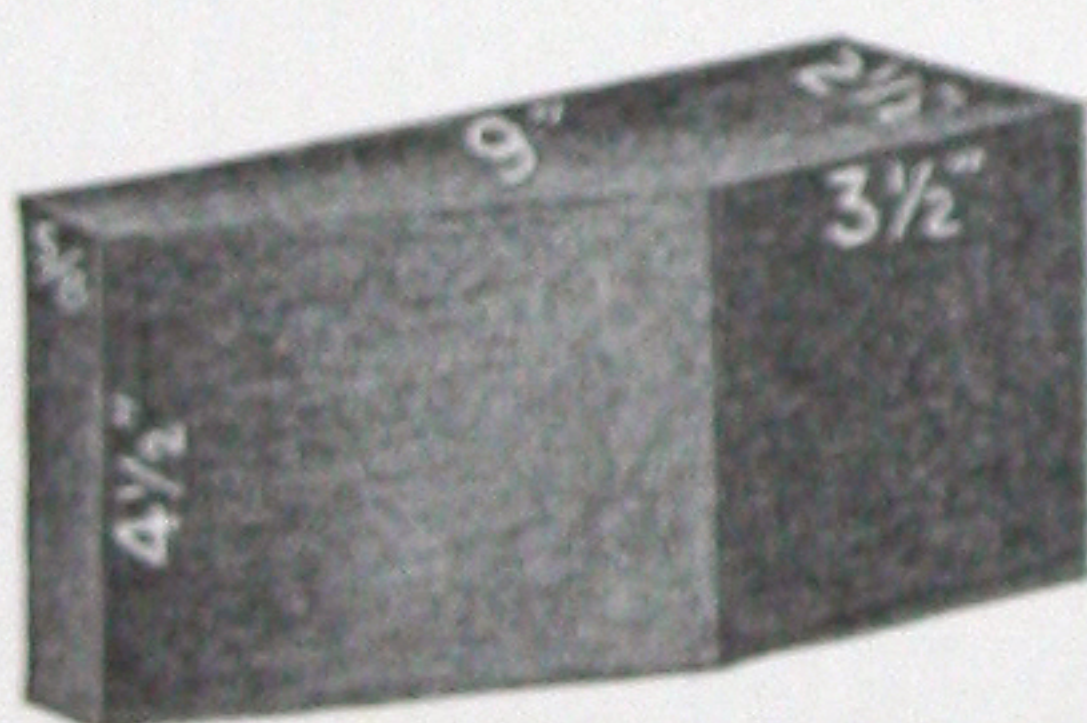
No. 2 Wedge
9 x 4 1/2 x (2 1/2 - 1 1/2)



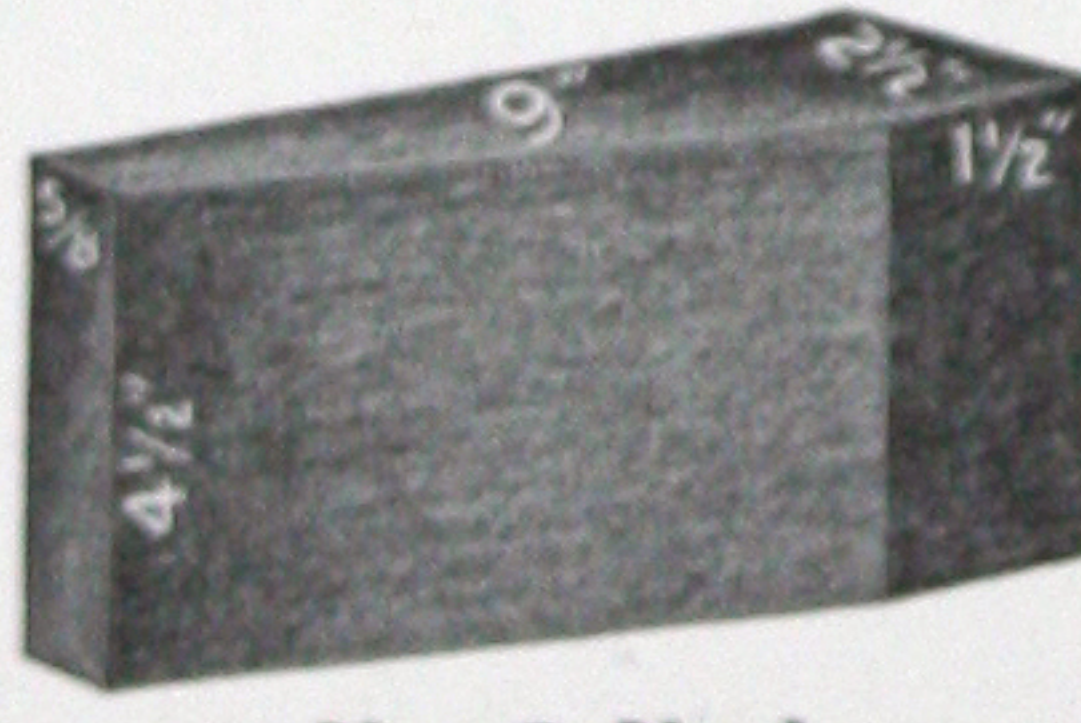
Jamb
9 x 4 1/2 x 2 1/2



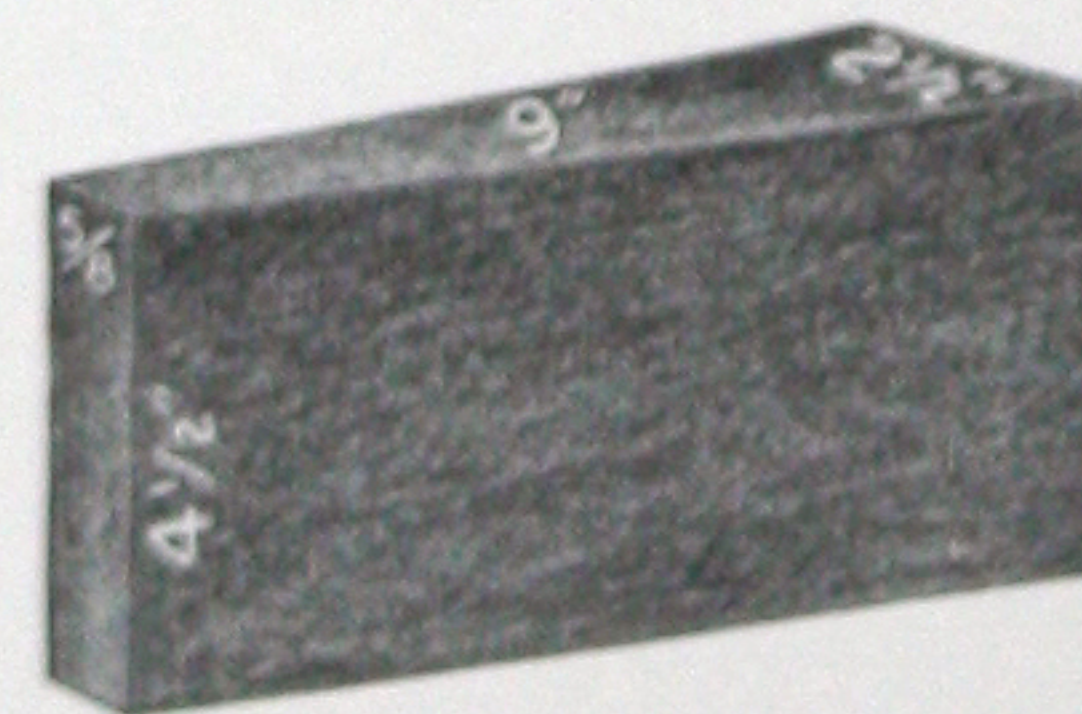
Side Skew
9 x (4 1/2 - 2 1/4) x 2 1/2



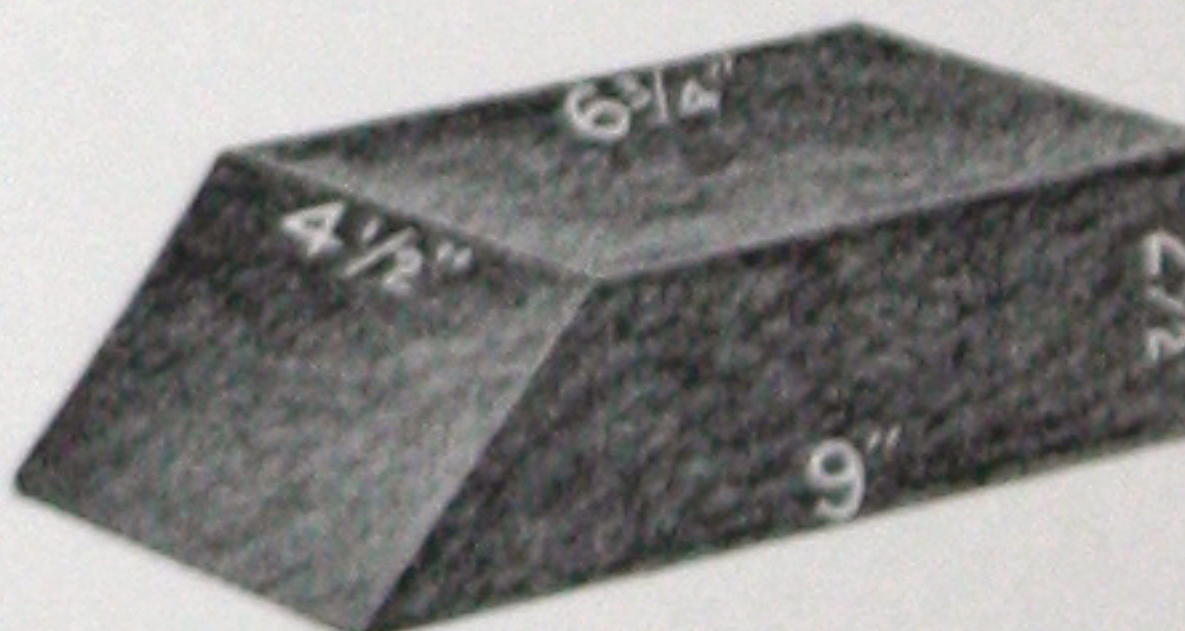
No. 1 Neck
9 x 4 1/2 x 3 1/2 x 2 1/2 x 5/8



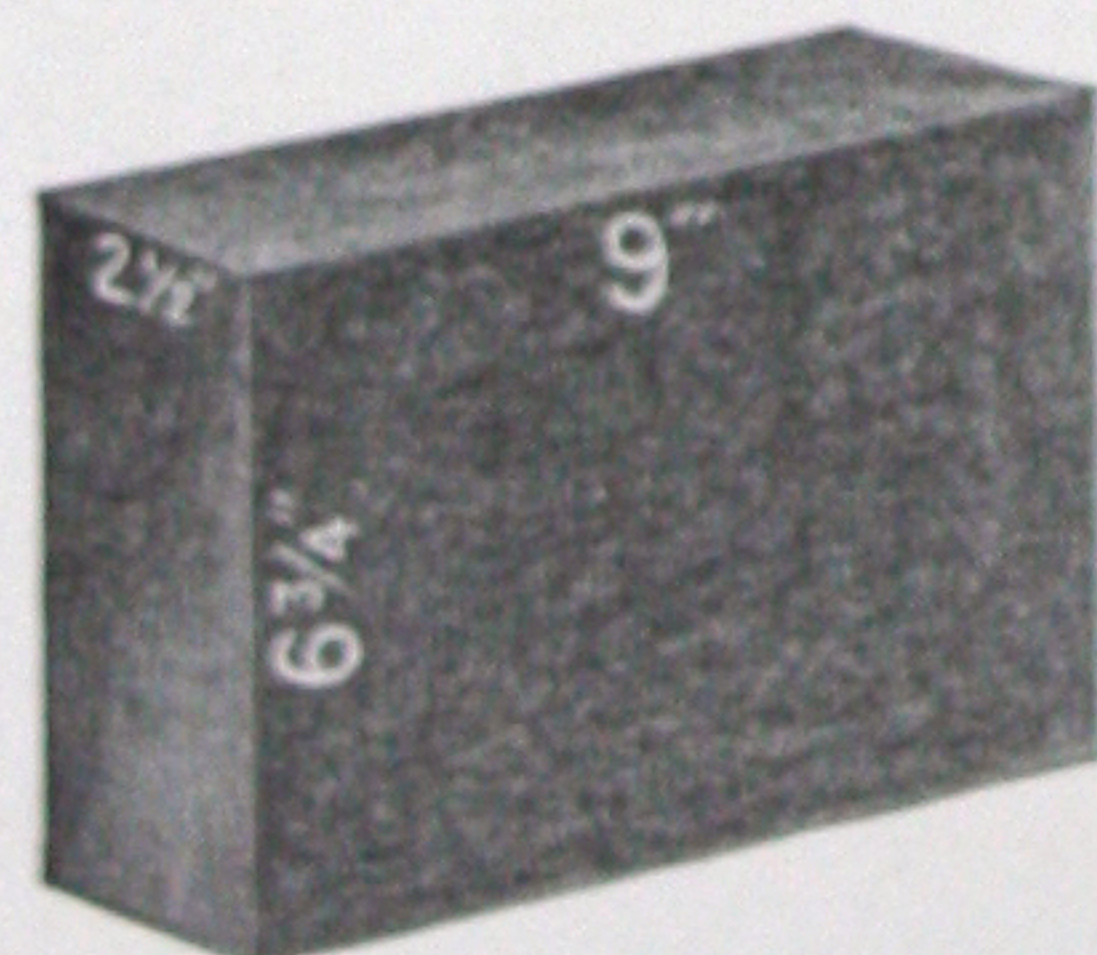
No. 2 Neck
9 x 4 1/2 x 2 1/2 x 1 1/2 x 5/8



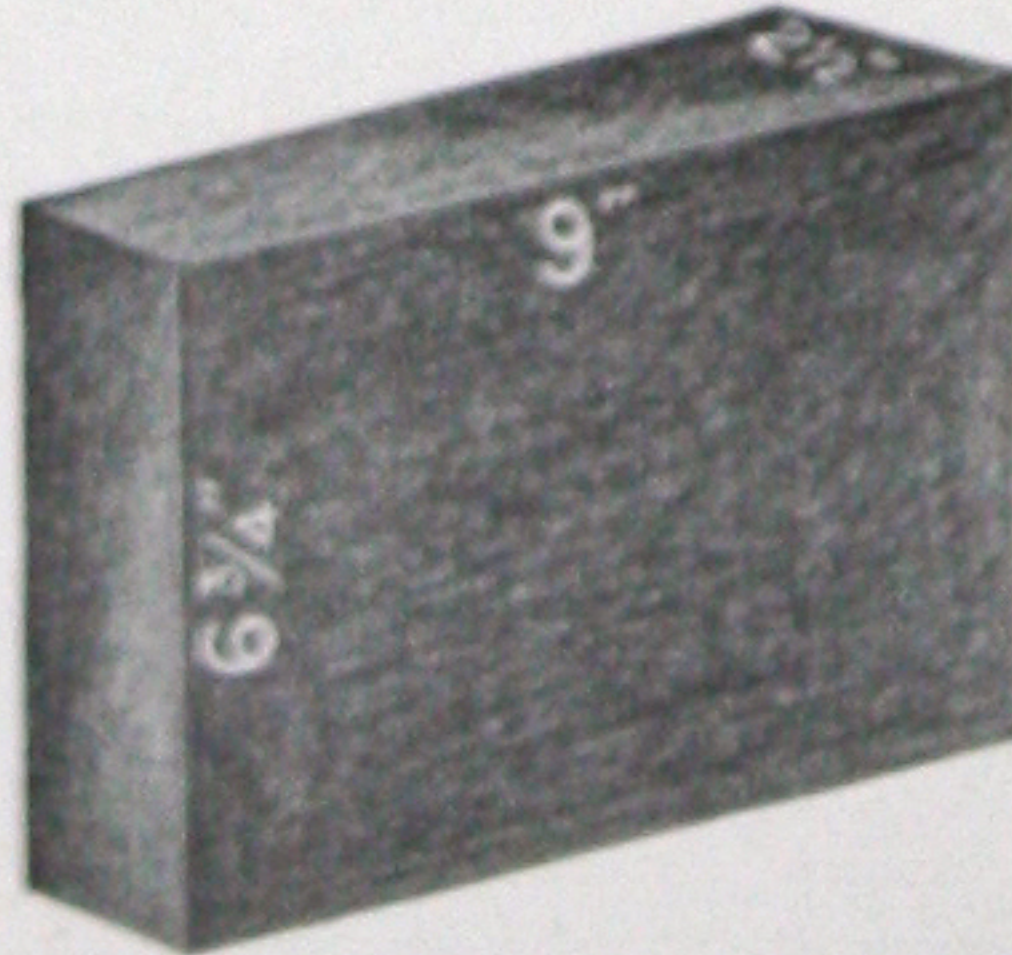
No. 3 Neck
9 x 4 1/2 x (2 1/2 - 5/8)



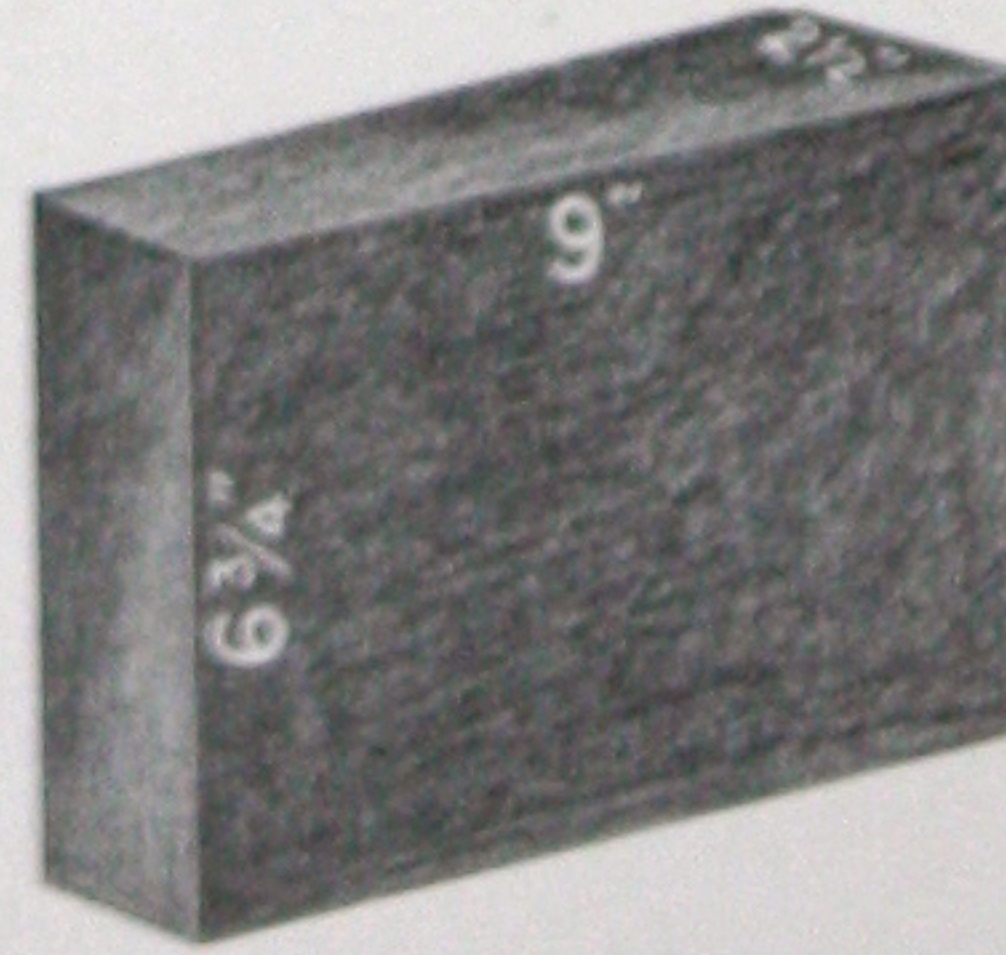
End Skew
(9 - 6 3/4) x 4 1/2 x 2 1/2



Large 9-in.
9 x 6 3/4 x 2 1/2



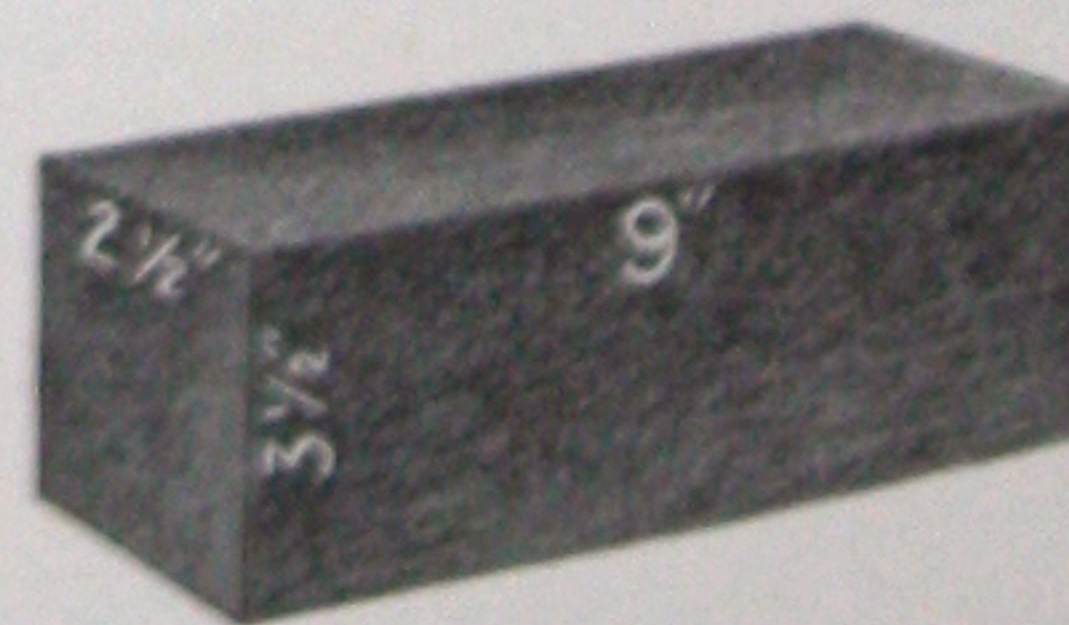
Large No. 1 Wedge
9 x 6 3/4 x (2 1/2 - 1 7/8)



Large No. 2 Wedge
9 x 6 3/4 x (2 1/2 - 1 1/2)

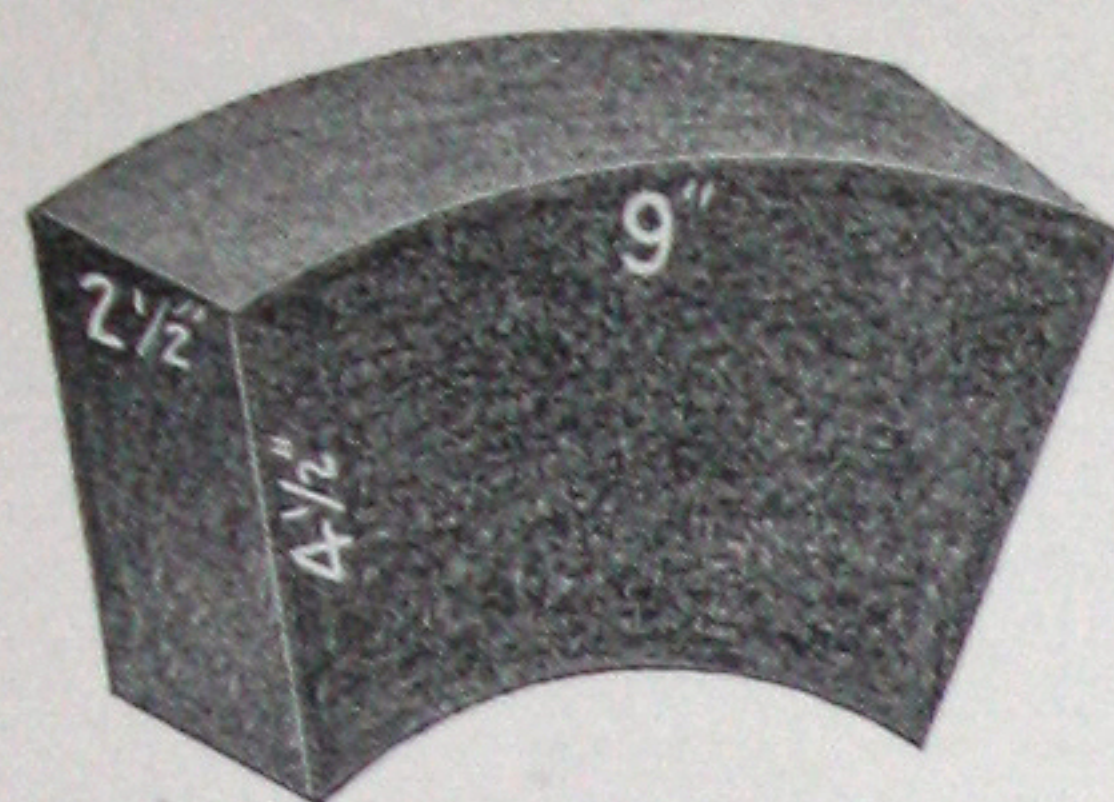


Feather Edge
9 x 4 1/2 x (2 1/2 - 1/8)



Small 9-in.
9 x 3 1/2 x 2 1/2

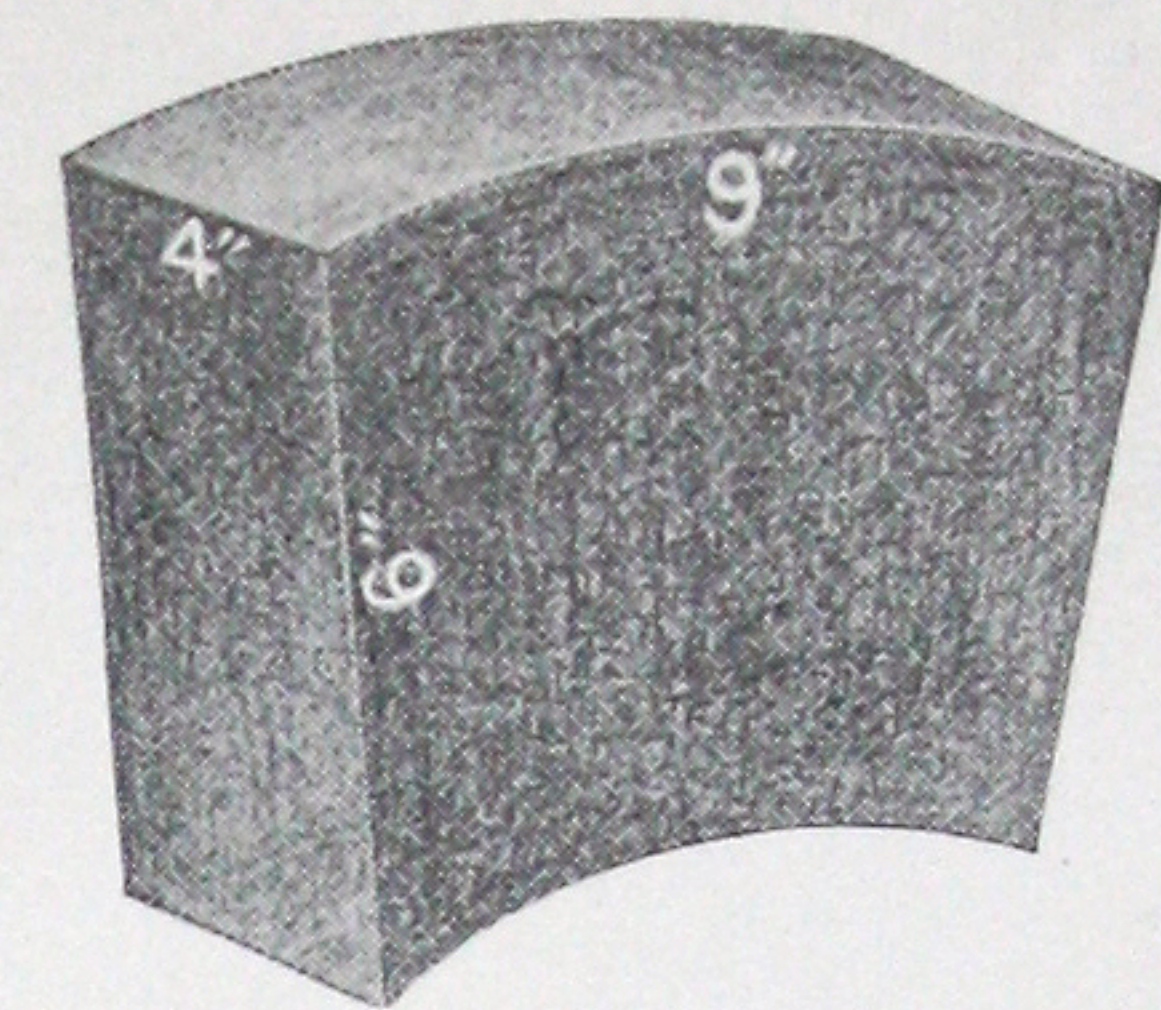
Circle Brick



Circle Brick

No.	Diameter of Circle		No. of Blocks in one Course	No.	Diameter of Circle		No. of Blocks in one Course
	Inside	Outside			Inside	Outside	
24	24 in.	33 in.	12	30	30 in.	42 in.	15
36	36 "	45 "	15	36	36 "	48 "	17
48	48 "	57 "	20	48	48 "	60 "	21
60	60 "	69 "	25	60	60 "	72 "	25
72	72 "	81 "	28	72	72 "	84 "	29

Cupola Brick



Cupola Brick

Table of Standard 9-in. Circle Brick

Inside Diameter	24-inch Circle	36-inch Circle	48-inch Circle	60-inch Circle	72-inch Circle	Total
2 ft. 0 in.	12					12
2 " 3 "	9	4				13
2 " 6 "	6	8				14
2 " 9 "	3	12				15
3 " 0 "		16				16
3 " 3 "		11	6			17
3 " 6 "		7	11			18
3 " 9 "		3	16			19
4 " 0 "			20			20
4 " 3 "			14	7		21
4 " 6 "			9	13		22
4 " 9 "			4	19		23
5 " 0 "				24		24
5 " 3 "				17	8	25
5 " 6 "				11	15	26
5 " 9 "				5	22	27
6 " 0 "					28	28

Table of 9 - inch Key Brick

Inside Diameter	No. 3 Key	No. 2 Key	No. 1 Key	Total
5 ft. 0 in.	5	50		55
5 " 3 "		57		57
5 " 6 "		55	4	59
6 " 0 "		50	13	63
6 " 3 "		46	21	67
6 " 6 "		42	29	71
7 " 0 "		38	38	76
7 " 3 "		34	46	80
7 " 6 "		29	55	84
8 " 0 "		25	63	88
8 " 3 "		21	71	92
9 " 0 "		17	80	97
9 " 3 "		13	88	101
10 " 0 "		9	96	105
10 " 3 "		4	105	109
11 " 0 "			113	113

Table of 9 - inch Wedge Brick

Inside Diameter	No. 2 Wedge	No. 1 Wedge	Straight	Total
2 ft. 3 in.	57			57
2 " 6 "	49	11		60
3 " 0 "	38	30		68
3 " 3 "	26	50		76
3 " 6 "	12	71		83
4 " 0 "		91		91
4 " 3 "		91	8	99
4 " 6 "		91	15	106
5 " 0 "		91	23	114
5 " 3 "		91	30	121
5 " 6 "		91	38	129
6 " 0 "		91	45	136
6 " 3 "		91	53	144
6 " 6 "		91	60	151
7 " 0 "		91	68	159
7 " 3 "		91	76	167
7 " 6 "		91	83	174
8 " 0 "		91	91	182
8 " 3 "		91	98	189
8 " 6 "		91	106	197
9 " 0 "		91	113	204
9 " 3 "		91	121	212
9 " 6 "		91	128	219
10 " 0 "		91	136	227
10 " 3 "		91	143	234
10 " 6 "		91	151	242
11 " 0 "		91	158	249
11 " 3 "		91	166	257
11 " 6 "		91	173	264
12 " 0 "		91	181	272
12 " 3 "		91	188	279
12 " 6 "		91	196	287
13 " 0 "		91	203	294
13 " 3 "		91	211	302
13 " 6 "		91	218	309
14 " 0 "		91	226	317
14 " 3 "		91	233	324
14 " 6 "		91	241	332
15 " 0 "		91	248	339
15 " 3 "		91	256	347
15 " 6 "		91	263	354
16 " 0 "		91	271	362
16 " 3 "		91	278	369
16 " 6 "		91	286	377
17 " 0 "		91	293	384
17 " 3 "		91	301	392
17 " 6 "		91	308	399
18 " 0 "		91	316	407
18 " 3 "		91	323	414
18 " 6 "		91	331	422
19 " 0 "		91	338	429
19 " 3 "		91	346	437

Table of 9 - inch Arch Brick

Inside Diameter	No. 3 Arch	No. 2 Arch	No. 1 Arch	Straight	Total
0 ft. 6 in.	19				19
1 " 0 "	12	15			27
1 " 3 "	4	30			34
1 " 6 "		38			38
2 " 0 "		34	8		42
2 " 3 "		26	23		49
2 " 6 "		19	38		57
3 " 0 "		11	53		64
3 " 3 "		4	68		72
3 " 6 "			76		76
4 " 0 "			76	4	80
4 " 3 "			76	11	87
4 " 6 "			76	19	95
5 " 0 "			76	27	103
5 " 3 "			76	34	110
5 " 6 "			76	42	118
6 " 0 "			76	49	125
6 " 3 "			76	57	133
6 " 6 "			76	64	140
7 " 0 "			76	72	148
7 " 3 "			76	79	155
7 " 6 "			76	87	163
8 " 0 "			76	94	170
8 " 3 "			76	102	178
8 " 6 "			76	109	185
9 " 0 "			76	117	193

Table of 9 - inch Key Brick

Inside Diameter	No. 4 Key	No. 3 Key	No. 2 Key	No. 1 Key	Total
1 ft. 6 in.	25				25
2 " 0 "	16	13			29
2 " 3 "	9	25			34
2 " 6 "		38			38
3 " 0 "		29	13		42
3 " 3 "		21	25		46
3 " 6 "		12	38		50

Inside Diameter	No. 1 Key	Straight	Total
12 ft. 6 in.	113	4	117
13 " 0 "	113	9	122
13 " 3 "	113	13	126
13 " 6 "	113	17	130
14 " 0 "	113	21	134
14 " 3 "	113	25	138
14 " 6 "	113	30	143
15 " 0 "	113	34	147
15 " 3 "	113	38	151
15 " 6 "	113	42	155
16 " 0 "	113	46	159
16 " 3 "	113	50	163
16 " 6 "	113	55	168
17 " 0 "	113	59	172
17 " 3 "	113	63	176
17 " 6 "	113	67	180
18 " 0 "	113	71	184
18 " 3 "	113	76	189
18 " 6 "	113	80	193
19 " 0 "	113	84	197
19 " 3 "	113	88	201
19 " 6 "	113	92	205
20 " 0 "	113	97	210
20 " 3 "	113	101	214
20 " 6 "	113	105	218
21 " 0 "	113	109	222
21 " 3 "	113	113	226
21 " 6 "	113	117	230
22 " 0 "	113	122	235
22 " 3 "	113	126	239
22 " 6 "	113	130	243
23 " 0 "	113	134	247
23 " 3 "	113	138	251
23 " 6 "	113	143	256
24 " 0 "	113	147	260
24 " 3 "	113	151	264
24 " 6 "	113	155	268
25 " 0 "	113	159	272
25 " 3 "	113	163	276
25 " 6 "	113	168	281
26 " 0 "	113	172	285
26 " 3 "	113	176	289
26 " 6 "	113	180	293
27 " 0 "	113	184	297
27 " 3 "	113	189	302
27 " 6 "	113	193	306

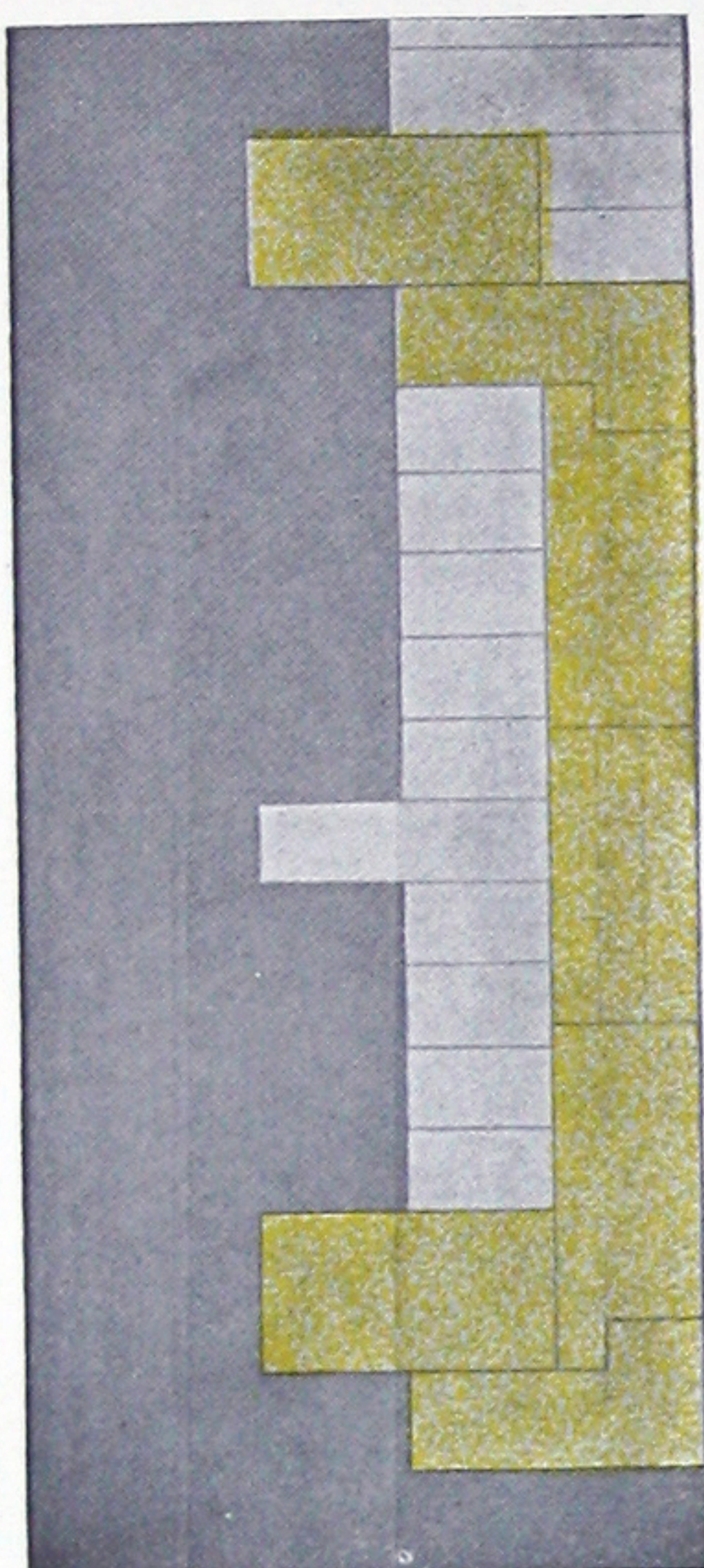
May also be used for 9 x 6 3/4 x 2 1/2" Wedges

Where the customer so desires, he may order enough brick for a given job and submit us the blue-prints, in which instance we will select the proper types and the proper quantity of each.

10 88-B 4069 TCF

MCLEOD & HENRY CO.

Some of the other STEEL MIXTURE Products

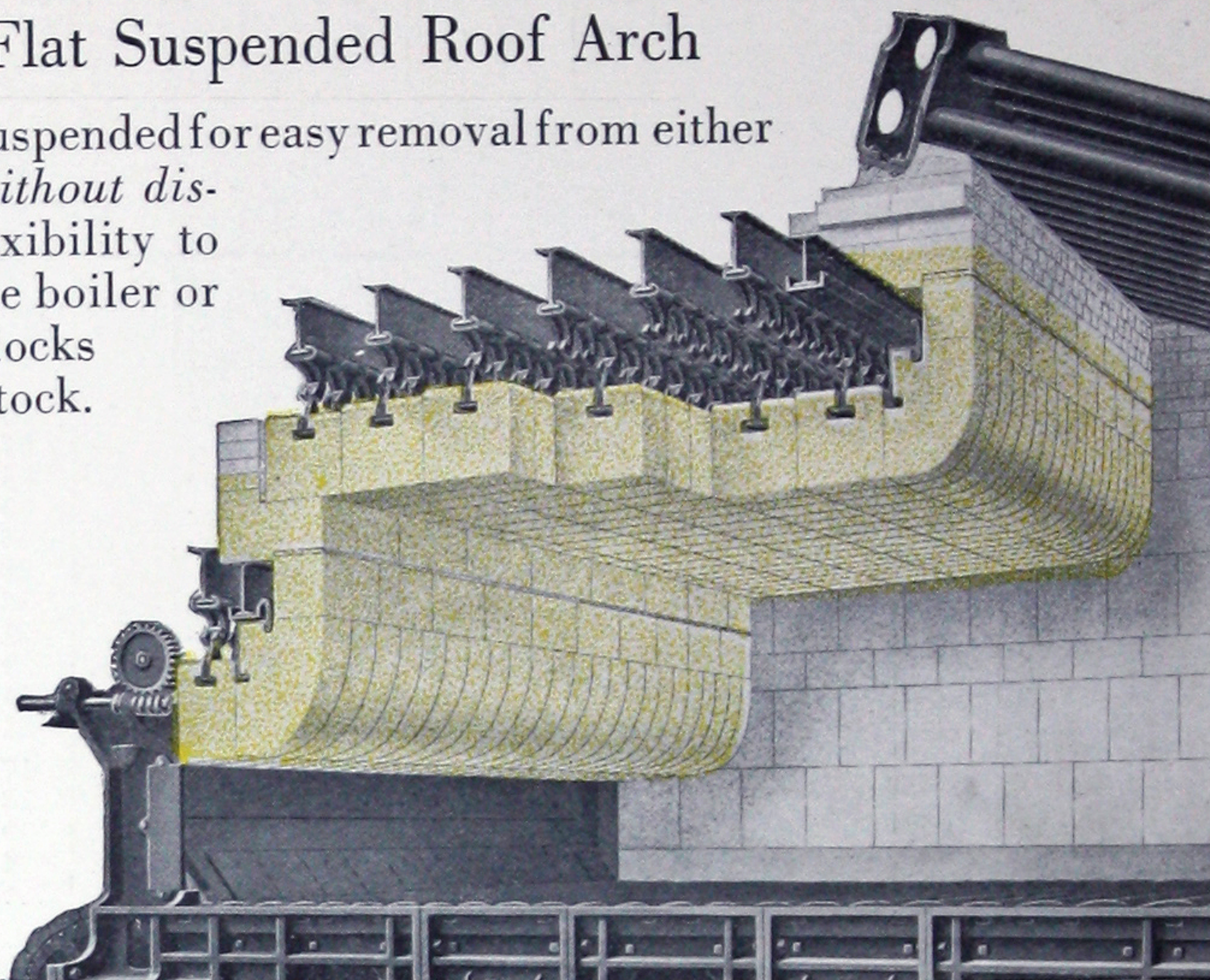


McLeod & Henry Flat Suspended Roof Arch

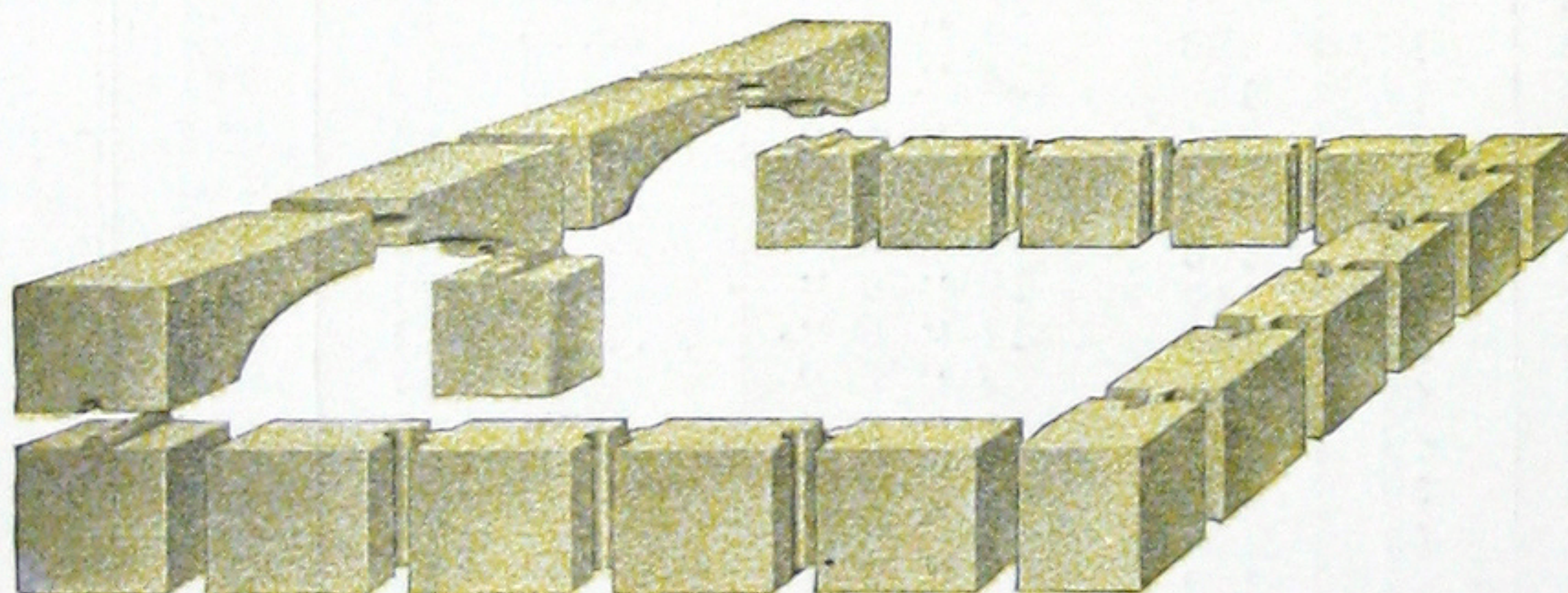
Each block independently suspended for easy removal from either *above or underneath* and *without disturbing others*. Design flexibility to meet needs of any water-tube boiler or topped furnace. Renewal blocks quickly obtainable from stock.

Veneer Furnace Lining

Extends inward for only part of the thickness of the fire wall, the rest of which can be built from standard fire brick. The inner fire wall, which gets least punishment, is built from cheaper material and becomes permanent, while the exposed portion can be renewed with less physical effort and with less expense for new material.



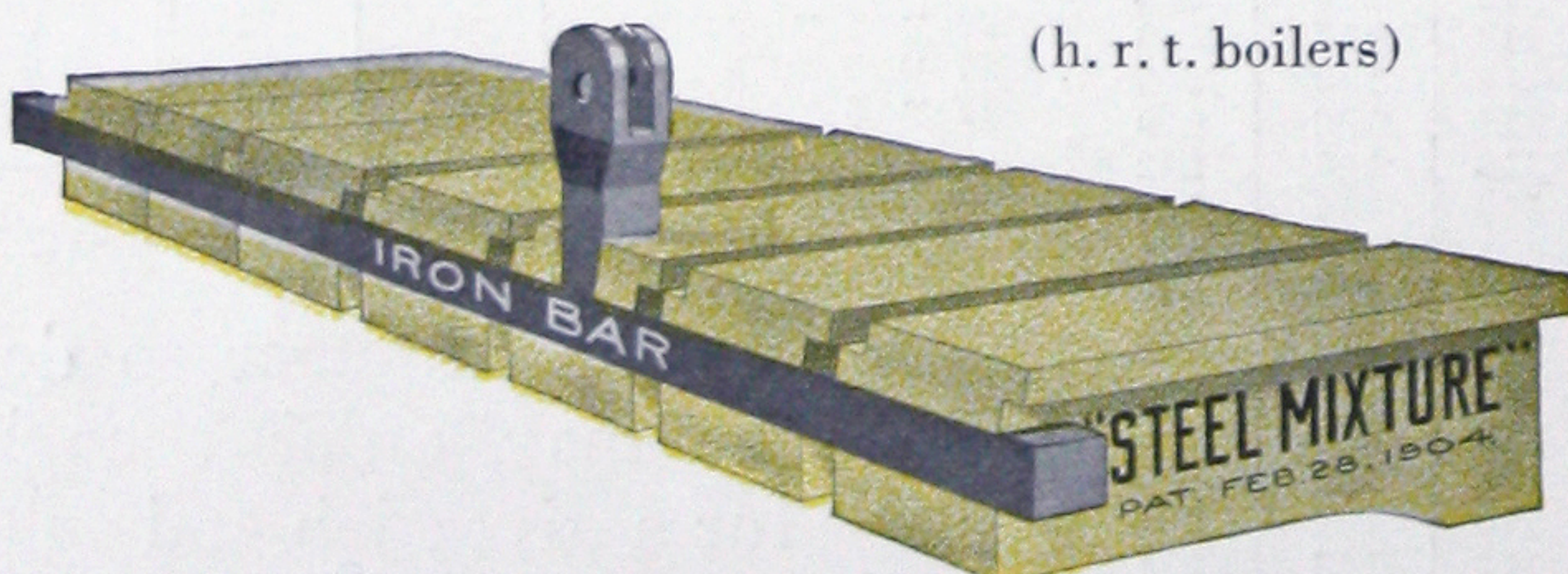
Boiler-Door Arches and Fire-Box Blocks



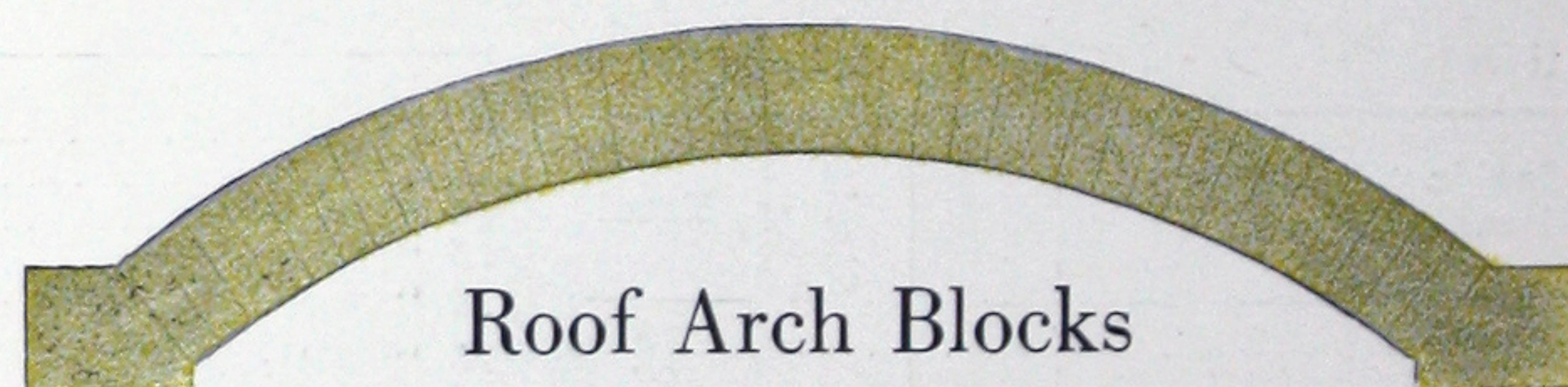
The strongest construction that can be put into a boiler. Saves time and labor in erecting and greatly lessens the number of joint corners and edges in the fire surface. Lasts twice as long as small brick. Sizes for any number and size of door openings.

Foote Back-Combustion-Chamber Arch

(h. r. t. boilers)



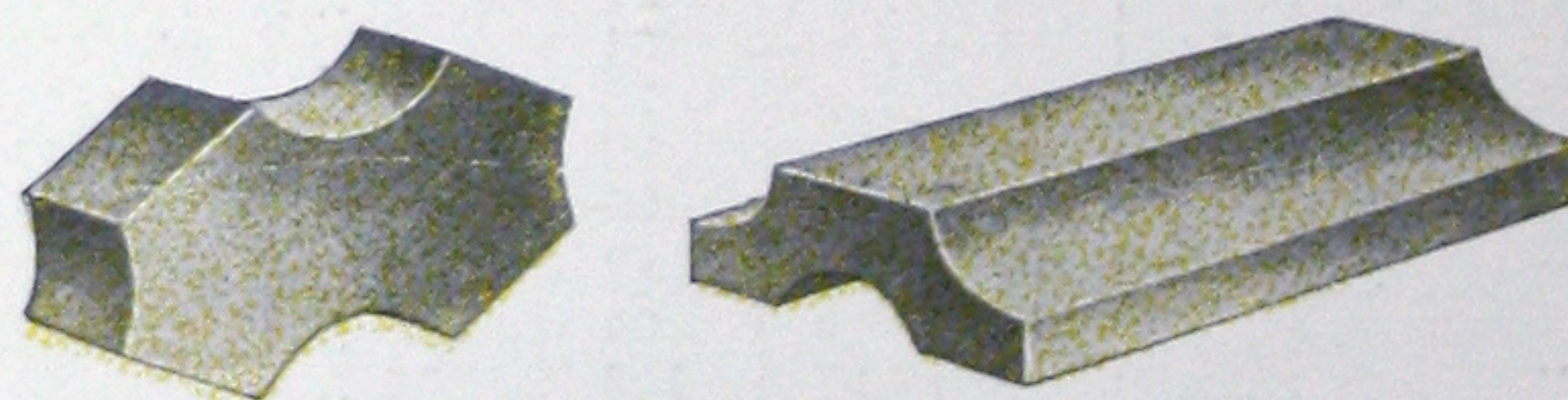
Forms a gas-tight cover for the back combustion chamber and protects the flue sheet to below the water line. Curved underneath and gives plenty of room for working with the tubes. Erected in an hour.



Roof Arch Blocks

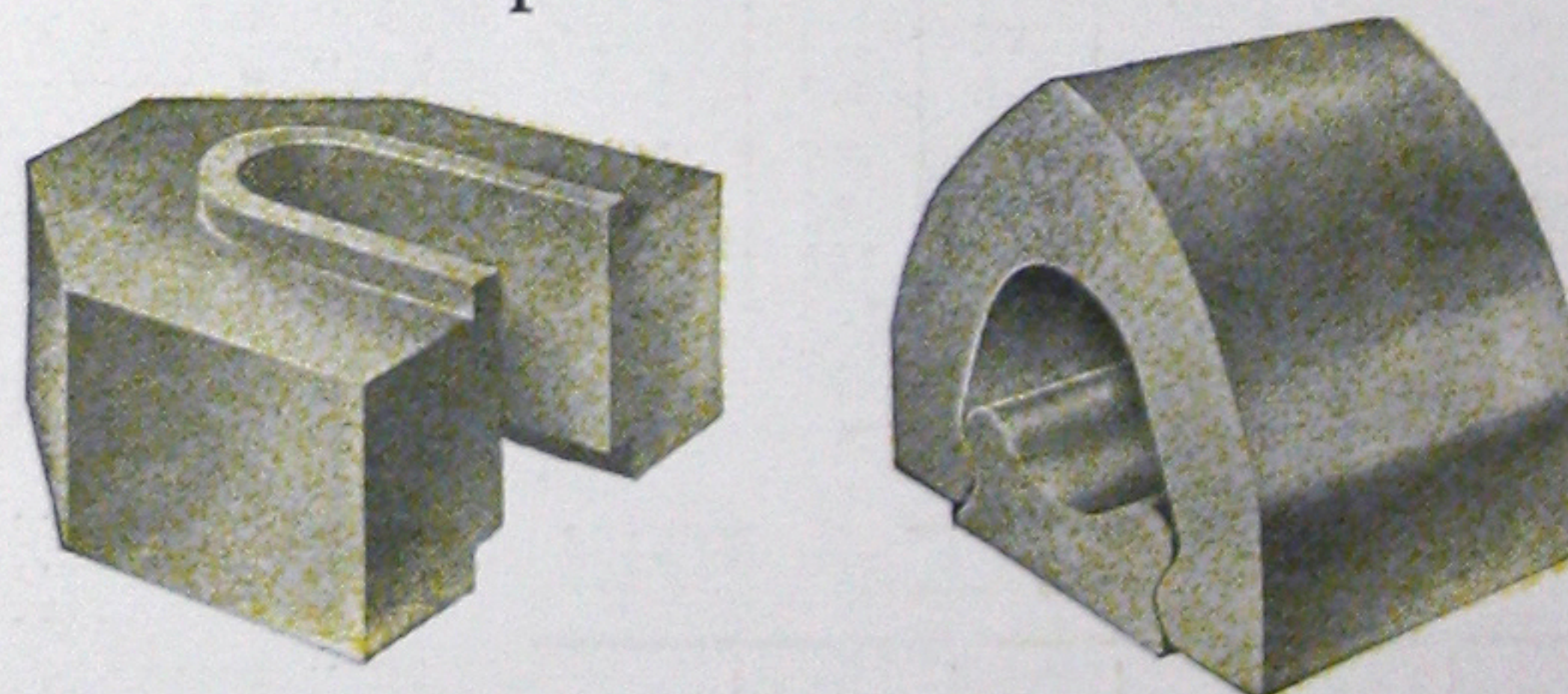
Complete with skew-backs. Any radius from 4 to 10' ft.

Baffle Tile



Shapes and sizes for all popular makes of boilers.

Blow-Off Pipe Protection (h. r. t. boilers)



Fitted to or removed from pipe quickly. Better than masonry piers. Pipe is accessible for inspection.

High-Temperature Cement

A bonding material and filler for laying and general repair work on furnace refractories. Air-sets without heat, and will stand high temperatures.

STEEL MIXTURE

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CCA